

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An optical substrate comprising:
a surface comprising a prism structure characterized by a cross section having a curved facet described by the equation

$$z = \frac{cr^2}{1 + \sqrt{1 - (1 + k)c^2r^2}} + dr^2 + er^4 + fr^6,$$

wherein z is the perpendicular deviation of the surface of the facet of the prism from a straight line originating at a first reference point and terminating at a second reference point and the coefficients of the polynomial lie within the following approximate ranges: $-20 < c < 20$; $-10 < d < 10$; $-10 < e < 10$; $-10 < f < 10$ and $-1 < k$ is less than or equal to zero and where r is a radial coordinate or distance from an optical axis the distance along the straight line from the first reference point, wherein the prism structure comprises a plurality of prisms having a prescribed peak angle, α , a height, h, a length, l, and a pitch, p, and the plurality of prisms include at least a pseudorandom peak angle, α , height, h, length, l, or pitch, p.

2-3 . (Cancelled)

4. (Currently Amended) The optical substrate as set forth in Claim 1 wherein a peak angle of the prism is greater than 90 degrees and less than 105 degrees and the refractive index of the substrate is between approximately 1.65 and 1.8.

5. (Original) The optical substrate as set forth in Claim 4 wherein the peak angle is 100 degrees.

6. (Original) An optical substrate comprising:

a surface comprising a prism structure characterized by a peak angle of greater than 90 degrees and less than 105 degrees and a refractive index of between approximately 1.65 and 1.8.

7. (Original) The optical substrate as set forth in Claim 6 wherein the peak angle is 100 degrees.

8. (Currently Amended) A backlight display device comprising:
an optical source for generating light;
a light guide for guiding the light therealong including a reflective device positioned along the light guide for reflecting the light out of the light guide;
an optical substrate receptive of the light from the reflective device, the optical substrate comprising:

a first surface and a second surface opposing the first surface, the first surface arranged closer to the light guide than the second surface, the second ~~[[a]]~~ surface comprising a prism structure characterized by a cross section having a curved facet.

9. (Original) The backlight display device as set forth in Claim 8 wherein the curved facet is described by a segment of a polynomial function.

10. (Currently Amended) The backlight display device as set forth in Claim 8 wherein the segment of the polynomial function is described by the equation

$$z = \frac{cr^2}{1 + \sqrt{1 - (1+k)c^2r^2}} + dr^2 + er^4 + fr^6,$$

wherein z is the perpendicular deviation of the surface of the facet of the prism from a straight line originating at a first reference point and terminating at a second reference point and the coefficients of the polynomial lie within the following approximate ranges: $-20 < c < 20$; $-10 < d < 10$; $-10 < e < 10$; $-10 < f < 10$ and $-1 < k$ is less than or equal to zero and where r is ~~a radial coordinate or distance from an optical axis~~ the distance along the straight line from the first reference point.

11. (Currently Amended) The backlight display device as set forth in Claim 8 wherein a peak angle of the prism is greater than 90 degrees and less than 105 degrees and the refractive index of the substrate is between approximately 1.65 and 1.8.

12. (Original) The backlight display device as set forth in Claim 11 wherein the peak angle is 100 degrees.

13. (Original) The backlight display device as set forth in Claim 8 wherein the optical substrate is formed with an optically transparent material with an index of refraction between approximately 1.65 and 1.8.

14. (Original) The backlight display device as set forth in Claim 10 wherein the optical substrate is formed with an optically transparent material with an index of refraction of approximately 1.75.

15. (Currently Amended) An optical substrate comprising:
a surface comprising a prism structure characterized by a cross section having a plurality of facets including a first facet oriented at a first angle with respect to the surface of the prism and a second facet oriented at a second angle with respect to the surface of the prism;

wherein the first and second facets intersect at one side of a centerline of the prism and the first and second angles are different, and

wherein a peak angle of the prism structure is greater than 90 degrees and less than 105 degrees, and the refractive index of the substrate is between approximately 1.65 and 1.8.

16. (Cancelled)

17. (Original) The optical substrate as set forth in Claim 16 wherein the peak angle is 100 degrees.

18. (Original) The optical substrate as set forth in Claim 1 wherein the prism structure is an ultraviolet curable organic or inorganic material.

19. (Original) The optical substrate as set forth in Claim 6 wherein the prism structure is an ultraviolet curable organic or inorganic material.

20. (Original) The backlight display device as set forth in Claim 8 wherein the prism structure is an ultraviolet curable organic or inorganic material.

21. (Original) The optical substrate as set forth in Claim 15 wherein the prism structure is an ultraviolet curable organic or inorganic material.

22. (Original) The optical substrate as set forth in Claim 1 wherein the prism structure includes a peak angle of greater than approximately 94 degrees and wherein c, d, e, f, and k are approximately equal to zero.

23. (Original) The optical substrate as set forth in Claim 1 wherein the equation for z includes higher order terms in r defined by the summation $\sum_{i=1}^N a_i r^i$ where ai are coefficients and N is an integer.

24. (Original) The optical substrate as set forth in Claim 10 wherein the prism structure includes a peak angle of greater than approximately 94 degrees and wherein c, d, e, f, and k are approximately equal to zero.

25. (Original) The optical substrate as set forth in Claim 10 wherein the equation for z includes higher order terms in r defined by the summation $\sum_{i=1}^N a_i r^i$ where ai are coefficients and N is an integer.

26-29. (Cancelled)